

# Commonwealth of Massachusetts Executive Office of Energy & Environmental Affairs

# Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

Charles D. Baker Governor

Karyn E. Polito Lieutenant Governor Matthew A. Beaton Secretary

> Martin Suuberg Commissioner

Mr. William VanSchalkwyk Massachusetts Institute of Technology 59 Vassar Street Cambridge, MA 02139-4307 **RE: CAMBRIDGE**Metropolitan Boston/Northeast Region 310 CMR 7.02 Plan Approval
Transmittal No. 13302
Appl. No. MBR-91-COM-027

Facility Master File No.: 314888
MODIFIED PLAN APPROVAL

Date stamped: Oct. 02, 2015

Dear Mr. VanSchalkwyk:

The Metropolitan Boston/Northeast Region of the Department of Environmental Protection (MassDEP), Bureau of Air and Waste, has reviewed your letter, dated October 30, 2013 which was submitted in response to Administrative Consent Order ACOP NE-13-7001, requesting a modification to Modified Final Approval No. MBR-91-COM-027, which was issued to you on August 23, 2006. Additional information regarding said request was provided to MassDEP electronically on July 25, 2014. The requested modification concerns the emissions of carbon monoxide ("CO") during periods of start up and shut down from your cogeneration unit, located at the Massachusetts Institute of Technology (MIT) Central Utilities Plant, 59 Vassar Street, Cambridge, Massachusetts, as well as other general administrative updates.

MassDEP has determined that your request is in conformance with current air pollution control engineering practices and hereby modifies said Approval. This Modified Plan Approval shall supersede Modified Final Approval No. MBR-91-COM-027 issued to you on August 23, 2006 in its entirety.

Please review this entire Modified Plan Approval carefully, as it stipulates the particular conditions with which the facility owner/operator must comply in order for the facility to be operated in compliance with the Regulations. Failure to comply with this Modified Plan Approval will constitute a violation of the Regulations and can result in the revocation of the Modified Plan Approval.

## BACKGROUND AND COGENERATION SYSTEM EQUIPMENT DESCRIPTION

The Final Approval was issued to you by MassDEP on March 10, 1998 subsequent to the successful completion of required compliance testing of MIT's Cogeneration System in September 1995 and June 1996. The March 10,1998 Final Approval acknowledged and approved these compliance test results, and contained details concerning the description of the Combustion Turbine Generator (GT-42-1A) and supplementary-fired Heat Recovery Steam Generator (HRSG-42-1B), as contained herein in Tables 1 and 2 below.

In addition the March 10, 1998 Final Approval contained fuel limitations on Central Utility Plant Boilers, BLR-42-3, BLR-42-4, and BLR-42-5, expressed in terms of British thermal units per year. The Modified Final Approval issued on August 23, 2006 contained emissions limits expressed in terms of tons per rolling twelve month period and pounds per million British thermal units. That modification afforded MIT fuel flexibility while ensuring that the Central Utilities Plant's potential emissions did not change.

Conditional Approval No. MBR-09-COM-007, issued on January 9, 2010 permitted the construction of a new exhaust stack for GT-42-1A and HRSG-42-1B, the updated details of which are included in Table 2 below.

This Modified Plan Approval (October 2015) incorporates the following items:

- 1) Updated stack parameters for the cogeneration unit's exhaust stack, which were approved under Conditional Approval No. MBR-09-COM-007, dated January 19, 2010, are included in Table 2.
- 2) Startup and shutdown emission limits for CO as well as maximum durations for periods of startup and shutdown are included in Table 3 and the notes to Table 3 (See Proviso Nos. I.1.a. and I.1.b.).
- 3) Clarification language from Conditional Approval No. MBR-91-COM-027, dated April 10, 1992, regarding the 30 days per consecutive twelve month time period calculation methodology is included. (See Proviso No. I.1.j.).
- 4) The applicable requirements from the promulgation of 40 CFR 60 Appendix F, Procedure 3 Quality Assurance Requirements for Continuous Opacity Monitoring Systems at Stationary Sources which replace requirements from prior reference to EPA Method 203 Determination of the Opacity of Emissions from Stationary Sources by Continuous Opacity Monitoring Systems are included (See Proviso No. II.2.a.).
- 5) The requirements, established in ACOP NE-13-7001, for training procedures for personnel involved with operating the Continuous Emissions Monitoring Systems and the Continuous Opacity Monitoring Systems at the Central Utility Plant are included (See Proviso No. II.2.f.).

**Table 1. System Description** 

Unit Type	Manufacturer	Capacity Rating and unit description
Combustion Gas Turbine Generator (GT-42-1A)	ASEA Brown Boveri GT 10	22 Megawatts, output and 229 million Btu/hr <sup>1</sup> , input
Supplementary-fired Heat Recovery Steam Generator (HRSG-42-1B)	Applied Thermal Systems	210.7 million Btu/hr, total input <sup>2</sup>
CO Oxidation Catalyst	W.R. Grace	Maximum exhaust flowrate of 160,000 dscfm <sup>3</sup> and design CO <sup>4</sup> to CO <sub>2</sub> <sup>5</sup> conversion rate of 98.0 weight percent
Continuous Emissions Monitoring System (CEMS)	Horiba	Pollutants monitored: NO <sub>x</sub> <sup>6</sup> and CO; O <sub>2</sub> <sup>7</sup> as reference gas

#### Please note:

- 1 Btu/hr = British Thermal Units per hour
- The total HRSG-42-1B Btu input consists of 64.7 million Btu/hr from the supplemental burners and 146 million Btu/hr from the GT-42-1A exhaust stream
- 3 dscfm = dry standard cubic feet per minute
- 4 CO = carbon monoxide
- 5  $CO_2$  = carbon dioxide
- $6 NO_x = nitrogen oxides$
- 7  $O_2 = oxygen$

**Table 2. Stack Parameters** 

Stack height above the ground	Stack height above the roof	Stack inside exit diameter	Minimum stack gas velocity
127 feet	63 feet	72 inches	103 feet per second

GT-42-1A uses two types of fuels: 1) natural gas as the primary fuel of use and 2) transportation diesel fuel oil having a sulfur content not in excess of 0.05 weight percent, as the secondary fuel of use (See Proviso No. I.1.e.). The use of transportation diesel fuel oil will be limited to those periods when natural gas is not available, but in no event will such use exceed 30 days per consecutive twelve month time period (See Proviso No. I.1.j.).

**Table 3. Cogeneration System Emission Limitations** 

		Units	Emission Limitations		
Pollutant	Fuel		GT-42-1A	HRSG- 42-1B	Combined System <sup>1</sup>
	Nat.Gas	lb/MMBtu <sup>2</sup>	0.007	0.005	
Particulate	No.2 fuel oil	lb/MMBtu	0.040	0.055	
NO <sub>x</sub> <sup>9</sup>	Natural Gas	ppm <sup>3</sup> lb/hr <sup>4,11</sup> lb/MMBtu	15 15.3 	9.1 0.14	24.4 
	No.2 fuel oil	ppm lb/hr <sup>4,11</sup> lb/MMBtu	42 39.3 	7.3 0.11	 46.6 
CO <sup>10</sup>	Natural Gas	ppm <sup>5,11</sup>			10
		lb/hr <sup>4,8</sup>			148.9 during startups <sup>6</sup>
					81.1 during shutdowns <sup>7</sup>
	No.2 fuel oil	ppm <sup>5,11</sup>			10
		lb/hr <sup>4,8</sup>			181.5 during startups <sup>6</sup>
					56.1 during shutdowns <sup>7</sup>

#### Please note:

- 1 The combined system includes GT-42-1A and HRSG-42-1B operating simultaneously
- 2 lb/MMBtu = pounds per million British Thermal Units fired
- 3 ppm = parts per million referenced to 15 percent oxygen, volume dry, ISO
- 4 lb/hr = pounds per hour
- 5 Periods during startup and shutdown are excluded from the calendar day CO emission rate compliance averaging time
- 6 Startups begin with initiation of flame and shall not exceed three hours
- 7 Shutdowns end with cessation of fuel firing and shall not exceed two hours
- 8 Compliance with the CO lb/hr startup and shutdown emission limits will be demonstrated by averaging hourly emission rates per event.
- 9  $NO_x = nitrogen oxides$
- 10 CO = Carbon monoxide
- 11 Compliance shall be determined over calendar day averages

The final Standard Operating and Maintenance Procedures (SOMP) for the Cogeneration System have been submitted to this Office (See Proviso No. III.3.).

#### I. EMISSIONS AND FUELS LIMITATION REQUIREMENTS

- 1.a. The Permittee shall ensure that this Cogeneration System shall not exceed the following emission limitations: the NO<sub>x</sub> emission limitation of 15.3 pounds per hour (lb/hr) from the GT-42-1A and 9.1 lb/hr from the HRSG-42-1B, while combusting natural gas, and 39.3 lb/hr from the GT-42-1A and 7.3 lb/hr from the HRSG-42-1B, while combusting transportation diesel oil; and, other than during periods of startup and shutdown, the CO emission limitation of 10.0 parts per million referenced to 15 percent oxygen, volume dry, ISO (ppmvd). Compliance with the above emission limitations shall be determined over calendar day averages (See Proviso No. II.2.a.).
- 1.b. During periods of startup and shutdown the Permittee shall ensure that this Cogeneration System shall not exceed the following emission limitations: the CO emission limitation of 148.9 lb/hr during startups and 81.1 lb/hr during shutdowns, each while combusting natural gas; and 181.5 lb/hr during startups and 56.1 lb/hr during shutdowns, each while combusting transportation diesel oil. Startups begin with initiation of flame and shall not exceed three hours. Shutdowns end with cessation of fuel firing and shall not exceed two hours. Compliance with the CO lb/hr startup and shutdown emission limits shall be demonstrated by averaging hourly emission rates per event.
- 1.c. All applicable emission limitations are referenced to 15 percent oxygen and ISO conditions.
- 1.d. The Permittee shall demonstrate compliance with the emission limitations in Table 3 by performing compliance testing, when and if MassDEP deems it necessary.
- 1.e. The Permittee shall ensure that the maximum allowable sulfur content of the transportation diesel fuel shall be 0.05 weight percent.
- 1.f. The Permittee shall restrict fuel usage at the Central Utilities Plant such that combined air emissions from the GT-42-1A, HRSG-42-1B, and BLR-42-3, BLR-42-4, and BLR-42-5 do not exceed:
  - 26.4 tons of filterable particulate matter (PM) per any consecutive twelve month time period,
  - 147.0 tons of sulfur dioxide (SO<sub>2</sub>) emissions per any consecutive twelve month time period,
  - 30.2 tons of carbon monoxide (CO) per any consecutive twelve month time period,
  - 185.0 tons of nitrogen oxides (NO<sub>x</sub>) per any consecutive twelve month time period.

1.g. Compliance with the consecutive twelve month time period emissions limitations in Proviso No. I.1.f shall be determined utilizing the following equations:

#### Filterable particulate matter (PM):

$$\left(\frac{0.04 \, lb \, PM\left(U\right)}{MMBtu} + \frac{0.055 \, lb \, PM\left(V\right)}{MMBtu} + \frac{0.055 \, lb \, PM\left(W\right)}{MMBtu} + \frac{0.007 \, lb \, PM\left(X\right)}{MMBtu} + \frac{0.005 \, lb \, PM\left(Y\right)}{MMBtu} + \frac{0.0076 \, lb \, PM\left(Z\right)}{MMBtu}\right) \times \frac{ton}{2,000 \, lb} \leq \frac{26.4 \, tons \, PM}{c12 mtp}$$

#### **Sulfur dioxide (SO<sub>2</sub>):**

$$\left(\frac{0.051 lb \, SO_{2}\left(U\right)}{MMB tu} + \frac{0.051 lb \, SO_{2}\left(V\right)}{MMB tu} + \frac{0.514 lb \, SO_{2}\left(W\right)}{MMB tu} + \frac{0.0014 lb \, SO_{2}\left(X\right)}{MMB tu} + \frac{0.0014 lb \, SO_{2}\left(Y\right)}{MMB tu} + \frac{0.0014 lb \, SO_{2}\left(Y\right)}{MMB tu} + \frac{0.0014 lb \, SO_{2}\left(Y\right)}{MMB tu} \right) \times \frac{ton}{2,000 lb} \leq \frac{147.0 tons \, SO_{2}\left(Y\right)}{c12 mtp} + \frac{0.0014 lb \, S$$

<u>Carbon Monoxide (CO):</u> Calculations for carbon monoxide shall utilize CEMS data for emissions from the GT-42-1A and HRSG-42-1B.

$$\frac{CTG \& HRSG CEMS \ Data \ CO \ tons}{12 \ mrcp} + \left[ \left( \frac{0.035 \ lb \ CO \ (W)}{MMBtu} + \frac{0.04 \ lb \ CO \ (Z)}{MMBtu} \right) \times \frac{ton}{2,000 \ lb} \right] \leq \frac{30.2 \ tons \ CO}{c12 mtp}$$

<u>Nitrogen Oxides (NO<sub>x</sub>):</u> Calculations for nitrogen oxides shall utilize CEMS data for emissions from the GT-42-1A and HRSG-42-1B.

$$\frac{\textit{CTG \& HRSG CEMS Data NO}_x \textit{tons}}{12 \textit{mrcp}} + \left[ \left( \frac{0.3 \textit{lb NO}_x \left( W \right)}{\textit{MMBtu}} + \frac{0.2 \textit{lb NO}_x \left( Z \right)}{\textit{MMBtu}} \right) \times \frac{\textit{ton}}{2,000 \textit{lb}} \right] \leq \frac{185.0 \textit{tons NO}_x}{\textit{c12mtp}}$$

where:

- U = number of gallons of No. 2 fuel oil, having a maximum sulfur content of 0.05 percent by weight, fired in GT-42-1A per any consecutive twelve month time period multiplied by 0.138 MMBtu per gallon
- V = number of gallons of No. 2 fuel oil, having a maximum sulfur content of 0.05 percent by weight, fired in HRSG-42-1B per any consecutive twelve month time period multiplied by 0.138 MMBtu per gallon
- W = number of gallons of No. 6 fuel oil, having a maximum sulfur content of 0.5 percent by weight, fired in BLR-42-3, BLR-42-4, and BLR-42-5 per any consecutive twelve month time period multiplied by 0.142 MMBtu per gallon
- X = number of cubic feet of natural gas fired in GT-42-1A per any consecutive twelve month time period multiplied by 0.001 MMBtu per cubic foot
- Y = number of cubic feet of natural gas fired in HRSG-42-1B per any consecutive twelve month time period multiplied by 0.001 MMBtu per cubic foot
- **Z** = number of cubic feet of natural gas fired in BLR-42-3, BLR-42-4, and BLR-42-5 per any consecutive twelve month time period multiplied by 0.001 MMBtu per cubic foot
- $\mathbf{lb}$  = pounds
- **PM** = filterable particulate matter
- SO<sub>2</sub> = sulfur dioxide CO = carbon monoxide NO<sub>x</sub> = nitrogen oxides

**MMBtu** = 1.000,000 British thermal units

c12mtp = any consecutive twelve month time periodCEMS = continuous emissions monitoring system

- 1.h. GT-42-1A and HRSG-42-1B CEMS data will be used to calculate CO and NO<sub>x</sub> tons on a monthly basis by taking the ppm CEMS measurements, converting to pounds per million Btu for the hour and then multiplying by the Btu input for the corresponding hour and multiplying by the fraction of the hour that consisted of operating time. The pounds of CO and NO<sub>x</sub> on an hourly basis will each be summed on a monthly basis in order to calculate the consecutive twelve month time period CO and NO<sub>x</sub> tons.
- 1.i. In addition the Permittee shall ensure that BLR-42-3, BLR-42-4, and BLR-42-5 shall not exceed the following emission limits contained in Table 4:

Table 4. BLR-42-3, BLR-42-4, and BLR-42-5 Emission Limitations

1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Pollutant	BLR-42-3, BLR-42-4,	BLR-42-3, BLR-42-4,		
	BLR-42-5 on No. 6 fuel oil	BLR-42-5 on natural gas		
	firing	firing		
Filterable particulate matter (PM)	0.055 lb/MMBtu <sup>1</sup>	0.0076 lb/MMBtu		
Sulfur dioxide (SO <sub>2</sub> )	0.514 lb/MMBtu	0.0014 lb/MMBtu		
Carbon Monoxide (CO)	0.035 lb/MMBtu	0.04 lb/MMBtu		
Nitrogen Oxides (NO <sub>x</sub> )	0.3 lb/MMBtu	0.2 lb/MMBtu		

Please Note:

- 1 lb/MMBtu = pounds per 1,000,000 British thermal units heat input
  - 1.j. The Permittee shall combust natural gas whenever it is available for its cogeneration system. If natural gas is unavailable, or during transportation diesel fuel testing, the Permittee may combust transportation diesel fuel in GT-42-1A and HRSG-42-1B for a maximum of 30 operating days per any consecutive twelve month time period. The Permittee shall report transportation diesel fuel usage in hours (to the nearest whole hour) for any transportation diesel fuel usage period that was less than 24 hours. The Permittee shall maintain adequate records to document that it has not exceeded the 30 day limit on-site for five (5) years and shall make said records available to MassDEP personnel upon request.
  - 1.k. The Permittee shall ensure that any No. 6 fuel oil combusted in BLR-42-3, BLR-42-4, and BLR-42-5 shall have a sulfur content of no greater than 0.5 weight percent.
  - 1.1. In the event of a major GT-42-1A failure, the Permittee shall notify MassDEP of such within twenty-four (24) hours thereafter by FAX to (978) 694-3498 and within seven business days thereafter in writing. The Permittee's written notification shall state the reason(s) for the outage and the steps taken to ensure that the outage shall not recur.

# II. CONTINUOUS EMISSIONS MONITORING SYSTEM, TESTING, AND OPACITY REQUIREMENTS

2.a. The Permittee shall use and maintain its continuous emissions monitoring system (CEMS) to measure nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO), and its continuous opacity monitors (COMS) to measure opacity levels; both the CEMS and COMS are "direct compliance" monitors. "Direct-compliance" monitors generate data that legally documents the compliance status of a source. MassDEP will utilize the data generated by the "direct-compliance" monitors for compliance and enforcement purposes. As such, The Permittee shall ensure that the CEMS comply with the Quality Assurance (QA) requirements contained in the Code of Federal Regulations 40 CFR Part 60, Appendix F, Procedure 1 for NO<sub>x</sub> and CO and Procedure 3 for COMS.

The Appendix F, Procedure 1 requirements for NO<sub>x</sub> and CO include the following actions: a) Section 3 requires the Permittee to develop, implement, and update a quality control (QC) program for the CEMS; b) Section 4 requires that a calibration drift assessment be performed and recorded on a daily basis; c) Section 5 requires quarterly performance audits. One of the four audits for each calendar year must be a relative accuracy test audit; d) Section 7 requires quarterly reporting of all calibration assessment and accuracy audit results to MassDEP.

The Appendix F, Procedure 3 requirements for COMS include the following actions: a) Section 9 requires the Permittee to develop, implement, and update a QC program for the COMS; b) Section 10.1 requires daily system checks that include a calibration drift assessment and a status indicator check be performed during each operating day; c) Section 10.2 requires quarterly auditing requirements during each operating quarter that include a zero compensation determination, a calibration error test and an optical alignment; d) Section 10.3 requires an annual zero alignment check; and e) Section 10.9 requires quarterly reporting of quality assurance test results to MassDEP.

- 2.b. The Permittee shall comply with the applicable Performance Specification(s) contained in the Code of Federal Regulations 40 CFR Part 60, Appendix B if any of the major components of the CEMS are replaced, such as an analyzer.
- 2.c. The Permittee shall ensure that compliance testing requirements for particulates take the average from three test runs to determine an emission rate at each fuel operating condition. The compliance testing protocol shall follow EPA reference test methods contained in the Code of Federal Regulations 40 CFR Part 60, Appendix A.
- 2.d. The Permittee shall ensure that the opacity (of all emissions) from the Cogeneration System shall be five percent or less except for a 6-minute block average in any one hour when the visible emissions may have an opacity ranging from five to ten percent. At no time shall the emissions from the Cogeneration System exceed ten percent opacity, except during start-up periods. During start-up periods, the emissions from the Cogeneration System shall not exceed an opacity of 20 percent. A six minute block average calculated

from at least 36 data points, with a minimum of one data point from within each ten second block, shall be used to determine compliance.

- 2.e. MassDEP will evaluate all available data to determine if an emissions violation and/or a violation of proper operating and maintenance procedures has occurred. If so, MassDEP will follow established enforcement protocol.
- 2.f. As contained in Administrative Consent Order No. ACOP-NE-13-7001 the Permittee shall ensure that records of all CEMS and COMS training, including a description of the training provided, the names of personnel conducting training and of personnel trained, and the dates of training shall be maintained on site for no less than five years. The training shall consist of the following:

If the quarterly percent monitor availability (PMA) for an individual emissions limit monitored by CEMS or COMS (i.e. GT-42-1A/HRSG-42-1B NO<sub>x</sub> ppmvdc, NO<sub>x</sub> lb/hr, CO ppmvdc and Opacity %, Boilers 42-3, 42-4, and 42-5 Opacity %, Boiler 42-7 Opacity % and Boiler 42-9 NO<sub>x</sub> lb/MMBtu, NO<sub>x</sub> lb/hr, CO lb/MMBtu, CO lb/hr and Opacity %) drops below 95% for a calendar quarter, refresher training shall be provided to all personnel involved in CEMS and COMS operation. The additional training shall focus on the specific concerns causing the drop in PMA as well as a general review of the Permittee's CEMS and COMS QA/QC Program. The additional training shall be conducted no later than sixty (60) days following the quarter in which the low PMA occurred.

### III. EQUIPMENT OPERATION REQUIREMENTS

3. The Permittee shall ensure that the Final Standard Operating and Maintenance Procedures (SOMP) for the Cogeneration System shall be maintained in the Facility's control room. In addition, any subsequent revisions made to the SOMP shall be submitted to this Office, Attention: Bureau of Air and Waste Permit Chief, within seven days of the modification(s).

### IV. RECORD KEEPING AND REPORTING REQUIREMENTS

- 4.a. The Permittee shall ensure that copies of the operating records of the Cogeneration System for the most recent five years shall be maintained on-site and shall be made available for inspection by MassDEP personnel upon request.
- 4.b. The Permittee shall ensure that Cogeneration System excess emission reports (EER) for nitrogen oxides, carbon monoxide, and opacity are submitted to this Office as required in 40 CFR Part 60.7(c). These reports shall include the magnitude, duration, date, and time of occurrence, the reason for the occurrence, the cause of the excess emission(s), the corrective action(s) taken, and the date, time, duration, and reason for any monitor outage(s).

- 4.c. The Permittee shall submit to this Office, the following information concerning the Cogeneration System on a quarterly basis:
  - i) all CEMS and COMS reports for NO<sub>x</sub>, CO, O<sub>2</sub> and opacity (See Proviso Nos. II. 2a., b., c., d., and e.); and
  - ii) the number of days that transportation diesel fuel was combusted, and amount in gallons, in the cogeneration system (See Proviso No. I.1.j.).
- 4.d. The Permittee shall ensure that these reports shall be submitted to this Office by the thirtieth day of January, April, July, and October for the appropriate calendar quarter. The format of the CEMS reports shall comply with the MassDEP CEM guidelines.
- 4.e. The Permittee shall submit to this Office, an annual written report for the GT-42-1A, HRSG-42-1B, BLR-42-3, BLR-42-4, and BLR-42-5 to verify compliance with the applicable consecutive twelve month time period emissions limitations (See Proviso No. I.1.f). This report shall utilize the equations provided in Proviso No. I.1.f and shall be submitted along with the quarterly report above due on the thirtieth of January.
- 4.f. The Permittee shall keep operating and maintenance logbooks for the Cogeneration System on-site. These logbooks shall contain the following information:
  - i) Hours of operation of each unit including start-ups and shutdowns;
  - ii) All maintenance performed on the gas turbine combustion system, steam injection system, the oxidation catalyst, and CEMS;
  - iii) All fuel oil purchase order receipts;
  - iv) All fuel oil samples taken for sulfur or nitrogen content analysis as required by the SOMP. The SOMP requires MIT personnel to either take fuel samples for each new load of fuel oil and have the sample analyzed or obtain the fuel analysis report from the fuel supplier.
- 4.g. The Permittee shall maintain these records at the facility for five (5) years following the date of the reports and associated purchase orders and shall make them available to MassDEP personnel upon request.

#### V. GENERAL REQUIREMENTS

5.a. This Modified Plan Approval shall supersede the requirements and conditions contained in the August 23, 2006 Modified Final Approval No. MBR-91-COM-027 in its entirety.

- 5.b. Should any nuisance condition(s) be generated by the operation of this facility, then appropriate steps shall immediately be taken by the Permittee to abate said nuisance condition(s).
- 5.c. The Permittee shall conduct compliance testing to demonstrate compliance with the emissions limitations in Table 3 and Table 4 when and if MassDEP deems it necessary.
- 5.d. The Permittee shall ensure that a copy of this Approval letter shall be maintained in an accessible location of the control room of the MIT Cogeneration Plant.
- 5.e. The Permittee shall allow MassDEP personnel access to the plant site, buildings, and all pertinent records at all times for the purpose of making inspections, surveys, collecting fuel samples, and reviewing SOMP and CEMS records.

#### VI. NOTIFICATION

- 6.a. Should the Permittee's natural gas supply be interrupted, the Permittee shall notify MassDEP within twenty-four (24) hours thereafter by FAX at (978) 694-3498 and within seven calendar days thereafter in writing. This written notification shall indicate the date and time of interruption, expected duration of interruption, and anticipated date and time when a natural gas supply to the facility will resume. The Permittee shall notify MassDEP, as required above, when natural gas combustion has resumed at the facility.
- 6.b. The Permittee shall notify MassDEP by FAX (978) 694-3498 within twenty-four hours of the occurrence of any air pollution control equipment malfunction such as a shutdown of the steam injection system and within seven calendar days thereafter in writing. This written notification shall indicate the date and time of the occurrence, the reason(s) for the occurrence and the steps that have been or will be taken to prevent its recurrence in the future.

Failure to comply with any of the above stated provisos will constitute a violation of the Air Pollution Control Regulations at 310 CMR 7.00.

This Modified Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Modified Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the Modified Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, Massachusetts 02211

The request will be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Please be advised that this Approval does not negate the responsibility of the Permittee to comply with this or any other applicable federal, state, or local regulations now or in the future.

Should you have any questions concerning this matter, please do not hesitate to contact Susan McConnell at (978) 694-3292.

Very truly yours,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Susan McConnell Environmental Engineer Susan Ruch Deputy Regional Director And Acting Permit Chief Bureau of Air and Waste

copy: Public Health Department, 119 Windsor Street, Ground Level, Cambridge, MA 02139

Fire Headquarters, 491 Broadway, Cambridge, MA 02108

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